

Title 15 - Mississippi Department of Health

Part III – Office of Health Protection

Subpart 78 – Division Of Radiological Health

CHAPTER 01 REGULATIONS FOR CONTROL OF RADIATION IN MISSISSIPPI

200 Registration of Radiation Machines Facilities And Services

200.01 Purpose and Scope.

1. This section provides for the registration of radiation machines and facilities and for the registration of persons providing radiation machine installation, servicing, and/or services.
2. In addition to the requirements of this section, all registrants are subject to the applicable provisions of other sections of these regulations.

200.02 Definitions.

"Facility" means the location at which one or more devices or sources are installed and are under the same administrative control.

"Storage" means a condition in which a device or source is not being used for an extended period of time, and has been made inoperable.

200.03 Exemptions

1. Electronic equipment that produces radiation incidental to its operation for other purposes is exempt from the registration and notification requirements of this section, providing dose equivalent rate averaged over an area of 10 square centimeters does not exceed 0.5 millirem (5 μ Sv) per hour at 5 centimeters from any accessible surface of such equipment. The production, testing, or factory servicing of such equipment shall be exempt.
2. Radiation machines while in transit or storage incident thereto are exempt from the requirements of this section.
3. Domestic television receivers are exempt from the requirements of this section.

200.04 Shielding Plan Review

1. Prior to construction, the floor plans, shielding specifications and equipment arrangement of all new installations, or modifications of

existing installations, utilizing ionizing radiation for diagnostic or therapeutic purposes shall be submitted to the Agency for review and approval. The required information is denoted in Appendices A and B of this section.

2. The Agency may require the applicant to utilize the services of a qualified expert to determine the shielding requirements prior to the plan review and approval.
3. The approval of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose in excess of the limits prescribed in 400.101, of these regulations.
4. After installation of a radiation machine, the registrant shall maintain for inspection by the Agency:
 - a. the maximum rated technique factors of each x-ray system control panel;
 - b. scale drawing of the room in which a stationary radiation machine system is located with such drawing indicating the use of areas adjacent to the room and an estimation of the extent of occupancy by an individual in such areas. In addition, the drawing shall include:
 - i. the results of a survey for radiation levels present at the operator's position and at pertinent points outside the room at specified test conditions, or
 - ii. the type and thickness of materials, or lead equivalency, of each protective barrier.

200.05 Registration of Radiation Machines and Facilities. Each person having a radiation machine facility shall:

1. Apply for registration of such facility with the Agency prior to the operation of a radiation machine facility. Application for registration shall be completed on forms furnished by the Agency and shall contain all the information required by the form and accompanying instructions.
2. Designate on the application form an individual to be responsible for radiation protection.
3. Each registrant shall prohibit any person from furnishing radiation machine servicing or services as described in 200.06(4) to his radiation machine facility until such person provides evidence that he has been registered with the Agency as a provider of services in accordance with 200.06.

200.06 Application for Registration of Servicing and Services.

1. Each person who is engaged in the business of installing or offering to install radiation machines or is engaged in the business of furnishing or offering to furnish radiation machine servicing or services in this State shall apply for registration of such services with the Agency prior to furnishing or offering to furnish any such services.
2. Application for registration shall be completed on forms furnished by the Agency and shall contain all information required by the Agency as indicated on the forms and accompanying instructions.
3. Each person applying for registration under this section shall specify:
 - a. that he has read and understands the requirements of these regulations;
 - b. the services for which he is applying for registration;
 - c. the training and experience that qualify him to discharge the services for which he is applying for registration;
 - d. the type of measurement instruments to be used, frequency of calibration, and source of calibration; and
 - e. the type of personnel dosimeters supplied, frequency of reading, and replacement or exchange schedule.
4. For the purpose of 200.06, services may include but shall not be limited to:
 - a. installation and/or servicing of radiation machines and associated radiation machine components,
 - b. calibration of radiation machines or radiation measurement instruments or devices,
 - c. radiation protection or health physics consultations or surveys, and
 - d. personnel dosimetry services.
5. No individual shall perform services which are not specifically stated for that individual on the notice of registration issued by the Agency.

200.07 Issuance of Notice of Registration.

1. Upon a determination that an applicant meets the requirements of the regulations, the Agency shall issue a notice of registration.

2. The Agency may incorporate in the notice of registration at the time of issuance or thereafter by appropriate rule, regulation, or order, such additional requirements and conditions with respect to the registrant's receipt, possession, use, and transfer of radiation machines as it deems appropriate or necessary.

200.08 Expiration of Notice of Registration. Except as provided by 200.09(2), each notice of registration shall expire at the end of the specified day in the month and year stated therein.

200.09 Renewal of Notice of Registration.

1. Application for renewal of registration shall be filed in accordance with 200.05 or 200.06.
2. In any case in which a registrant not less than 30 days prior to the expiration of his existing notice of registration has filed an application in proper form for renewal, such existing notice of registration shall not expire until the application status has been finally determined by the Agency.

200.10 Report of Changes. The registrant shall notify the Agency in writing before making any change which would render the information contained in the application for registration and/or the notice of registration no longer accurate.

200.11 Approval Not Implied. No person, in any advertisement, shall refer to the fact that he or his facility is registered with the Agency pursuant to the provisions of 200.05 or 200.06. and no person shall state or imply that any activity under such registration has been approved by the Agency.

200.12 Assembler and/or Transfer Obligation.

1. Any person who sells, leases, transfers, lends, disposes, assembles, or installs radiation machines in this State shall notify the Agency within 15 days of:¹
 - a. the name and address of persons who have received these machines;
 - b. the manufacturer, model, and serial number of each radiation machine transferred; and
 - c. the date of transfer of each radiation machine.

¹ In the case of diagnostic x-ray systems which contain certified components, a copy of the assembler's report prepared in compliance with requirements of the Federal diagnostic x-ray standard (21 CFR 1020.30(d)) shall be submitted to the Agency within 15 days following completion of the assembly. Such report shall suffice in lieu of any other report by the assembler.

2. No person shall make, sell, lease, transfer, lend, assemble, or install radiation machines or the supplies used in connection with such machines unless such supplies and equipment when properly placed in operation and used shall meet the requirements of these regulations.

200.13 Out-Of-State Radiation Machines.

1. Whenever any radiation machine is to be brought into the State, for any temporary use, the person proposing to bring such machine into the State shall give written notice to the Agency at least 3 days before such machine is to be used in the State. The notice shall include:
 - a. the type of radiation machine;
 - b. the nature, duration, and scope of use;
 - c. the exact location(s) where the radiation machine is to be used; and
 - d. states in which this machine is registered.
2. If, for a specific case, the 3 day period would impose an undue hardship on the person, upon application to the Agency, permission to proceed sooner may be granted.
3. The person referred to in 200.13 (1) shall:
 - a. comply with all applicable regulations of the Agency;
 - b. supply the Agency with such other information as the Agency may reasonably request; and
 - c. not operate within the State on a temporary basis in excess of 180 calendar days per year.

Subpart 78**Section 200****APPENDIX A****Information On Radiation Shielding Required For Plan Reviews**

In order for the Agency to provide an evaluation, technical advice, and official approval on shielding requirements for a radiation installation, the following information must be submitted.

- I. The plans should show, as a minimum, the following:
 - a. The normal location of the x-ray system's radiation port; the port's travel and traverse limits; general direction(s) of the useful beam; locations of any windows and doors; the location of the operator's booth; and the location of the x-ray control panel.
 - b. The structural composition and thickness or lead equivalent of all walls, doors, partitions, floor, and ceiling of the room(s) concerned.
 - c. The dimensions of the room(s) concerned.
 - d. The type of occupancy of all adjacent areas inclusive of space above and below the room(s) concerned. If there is an exterior wall, show distance to the closest area(s) where it is likely that individuals may be present.
 - e. The make and model of the x-ray equipment and the maximum technique factors, and the energy waveform (single phase, three phase, etc.).
 - f. The type of examination(s) or treatment(s) which will be performed with the equipment.
- II. Information on the anticipated workload of the x-ray system(s) in mA-minutes per week.
- III. A report showing all basic assumptions used in the development of the shielding specifications.

Subpart 78**Section 200****APPENDIX B****Design Requirements For An Operator's Booth****I. Space Requirements:**

- a. The operator shall be allotted not less than 7.5 square feet (0.70m²) of unobstructed floor space in the booth.
- b. The operator's booth may be any geometric configuration with no dimension of less than 2 feet (0.61 m).
- c. The space shall be allotted excluding any encumbrance by the x-ray control panel, such as overhang, cables, or other similar encroachments.
- d. The booth shall be located or constructed such that unattenuated direct scatter radiation originating from the examination table or at the wall cassette holder will not reach the operator's position in the booth.

II. Structural Requirements:

- a. The booth walls shall be permanently fixed barriers of at least 7 feet (2.1 m) high.
- b. When a door or movable panel is used as an integral part of the booth structure, it must have an interlock which will prevent an exposure when the door or panel is not closed.
- c. Shielding shall be provided to meet the requirements of Section 400 of these regulations.

III. X-Ray Exposure Control Placement:

- a. The x-ray exposure control for the system shall be fixed within the booth and:
- b. Shall be at least 40 inches (1.0 m) from any open edge of the booth wall which is nearest to the examining table.
- c. Shall allow the operator to use the majority of the available viewing windows.

IV. Viewing System Requirements:

- a. Each booth shall have at least one viewing device which will:
 - i. Be so placed that the operator can view the patient during any exposure, and

- ii. Be so placed that the operator can have full view of any occupant of the room and should be so placed that the operator can view any entry into the room. If any door which allows access to the room cannot be seen from the booth, then outside that door there shall be an "x-ray on" warning sign that will be lighted anytime the rotor of the x-ray tube is activated. Alternatively, an interlock must be present such that exposures are prevented unless the door is closed.
- b. When the viewing system is a window, the following requirements also apply:
 - i. It shall have a viewing area of at least 1 square foot (0.093 m²).
 - ii. Regardless of size or shape, at least 1 square foot of the window area must be centered no less than 2 feet (0.61 m) from the open edge of the booth and no less than 5 feet (1.52 m) from the floor.
 - iii. The window shall have at least the same lead equivalence as that required in the booth's wall in which it is mounted.
- c. When the viewing system is by mirrors, the mirror(s) shall be so located as to accomplish the general requirements of Appendix B.IV(A).
- d. When the viewing system is by electronic means:
 - i. The camera shall be so located as to accomplish the general requirements of Appendix B.IV(A), and
 - ii. There shall be an alternate viewing system as a backup for the primary system.